

Double Athletic Ball Bounce Efficiency Instructions and Rubric
AP Physics

23 Points Total

1. Write a procedure for how you will measure the efficiency of two different athletic balls bouncing on top of one another. Perform your experiment twice, with two different athletic ball combinations. Be precise in your wording and measurements (3 points).
2. Draw a picture of the setup (2 points).
3. Create a data table listing the initial height, final height, initial potential energy, final potential energy, and efficiency for two combinations of two different athletic balls (3 points).
4. Calculations for initial and final potential energy and efficiency of each athletic ball (8 points; 2 for each athletic ball, twice).
5. Sources of error and improvements in the experiment (4 points; 2 each).
6. Conclusion, discussing the experiment and where the energy lost could have gone (3 points).